

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
NATIONAL COASTAL ASSESSMENT- NORTHEAST DATABASE
YEAR 2000 STATIONS
STATION LOCATION DATA: "STATIONS"

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1. DATASET IDENTIFICATION

1.1 Title of Catalog document

National Coastal Assessment-Northeast Region Database
Year 2000 Stations
Station Location Data

1.2 Authors of the Catalog entry

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1.3 Catalog revision date

December 29, 2003

1.4 Dataset name

STATIONS

1.5 Task Group

National Coastal Assessment-Northeast

1.6 Dataset identification code

001

1.7 Version

001

1.8 Request for Acknowledgment

EMAP requests that all individuals who download EMAP data acknowledge the source of these data in any reports, papers, or presentations. If you publish these data, please include a statement similar to: "Some or all of the data described in this article were produced by the U. S. Environmental

Protection Agency through its Environmental Monitoring and Assessment Program (EMAP)".

2. INVESTIGATOR INFORMATION (for full addresses see Section 13)

2.1 Principal Investigators

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2.2 Sample Collection Investigators

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2.3 Sample Processing Investigators

Not Applicable

3. DATASET ABSTRACT

3.1 Abstract of the Dataset

The STATIONS data file reports information regarding stations sampled during 2000 in the National Coastal Assessment in the Northeast Region. Each record reports the planned location of the station (latitude and longitude); various descriptions of the jurisdiction of the station's location (name of state, stratum, and estuary containing the station); identification of the cooperative responsible for sampling; the local identification code assigned to the station; and the area represented by the station and stratum (used as weighting factors during analysis). Weighting factors are presented in two forms: 1) based on state boundaries, and therefore useful for state analyses such as the Clean Water Act 305b report; and 2) based on stratum boundaries, thus useful for use in regional analyses. One record is presented per station.

3.2 Keywords for the Dataset

Latitude, longitude, estuary name, state, cooperative, stratum, weighting factor, area.

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The National Coastal Assessment (NCA) is a national monitoring and assessment program with the primary goal of providing a consistent evaluation of the estuarine condition in U.S. estuaries. It is an initiative of the Environmental Monitoring and Assessment Program (EMAP), and is a partnership of several federal and state environmental agencies, including: EPA's Regions, Office of Research and Development, and Office of Water; state environmental protection agencies in the 24 marine coastal states and Puerto Rico; and the United States Geological Survey (USGS) and the National Oceanic and Atmospheric Agency (NOAA). The five-year NCA program was initiated in 2000, and is also known as the Coastal 2000 Program.

Stations were randomly selected using EMAP's probabilistic sampling framework and were sampled once during a summer index period (June to October). A consistent suite of indicators was used to measure conditions in the water, sediment, and in benthic and fish communities. The measured data may be used by the states to meet their reporting requirements under the Clean Water Act, Section 305(b). The data will also be used to generate a series of national reports characterizing the condition of the Nation's estuaries.

4.2 Dataset Objective

To report information about station locations and weighting factors used during data analysis.

4.3 Dataset Background Discussion

The station locations (STA_LAT and STA_LNG) presented in this datafile are the *planned* latitude and longitude values designated by program designers. The *actual* latitudes and longitudes, which may differ slightly from the planned values, are reported as EVNT_LAT and EVNT_LNG in the EVENTS datafile. Generally, the user may find the actual location more useful during data analysis.

The parameter ST_COOP identifies the state-cooperative responsible for the administration of the NCA program in the Northeast. Generally, the jurisdiction of the cooperatives reflect state boundaries; however, in several incidences, a state-cooperative sampled station in a neighboring state's waters. Station Ids reflect the station's location, rather than the cooperative's identity. Use the parameter STATE to identify all stations located within a state's boundaries.

| ST_COOP | Description | Organizations responsible for sampling |
|---------|--------------------------|--|
| ME | Maine | Casco Bay Project/U of Southern Maine |
| NH | New Hampshire | Jackson Estuarine Lab/UNH |
| MA | Massachusetts | MA Coastal Zone Mgt. U. of Massachusetts/Boston, Dartmouth |
| MA-FSH | Massachusetts Fish | Mass. Marine Fisheries (2000 only) |
| RI | Rhode Island | Roger Williams University (in 2000) University of Rhode Island (in 2001) |
| RI-FSH | Rhode Island Fish Survey | Roger Williams University (2000 only) |
| CT | Connecticut | Connecticut DEP |
| CT-FSH | Connecticut Fish Survey | Connecticut DEP |
| NY | New York | MSRC, Stonybrook University Suffolk County Dep. Health Services NYC DEP Town of Hempstead |
| NJ-DB | New Jersey-Delaware Bay | New Jersey Marine Sciences Consortium |
| NJ-C | New Jersey Coast | New Jersey Marine Sciences Consortium |
| DE | Delaware Inland Bays | Delaware DNR |

A two-year sampling design was employed for 2000-2001 NCA program in the Northeast. Analysts may therefore wish to consider the two years of data together. NCA and State planners divided Northeast estuaries into 24 "strata" based on watershed boundaries and state jurisdiction. Each stratum was overlain by an imaginary grid of hexagons for the purpose of selecting stations. A primary station location and two alternate locations were

selected at random in the water portion of each hex; the alternate sites were specified in case the original location could not be sampled. On average, each stratum contains about 25 hexes (stations). By design, stations within a stratum were grouped with respect to state-cooperative boundaries; however, an alternate stratification based on state boundaries is described below. A scheme based on state boundaries is useful when reporting on state waters. The area of the water in a hex is reported for each station (parameter = AREA) for use as a weighting factor during analysis. The entire estuarine area of the stratum is reported for each stratum in the parameter ST_AREA. We describe below how AREA and ST_AREA may be used in analyses. The first table below lists the strata based on ST_COOP jurisdiction; the following table lists strata based on state boundaries. The number of stations each year of the two-year program are also listed.

| Stations stratified by ST_COOP | | Number of stations by year | | |
|--------------------------------|----------------------------|----------------------------|------|-------|
| ST_COOP | STRATA | 2000 | 2001 | Total |
| CT | CT Coastal | 9 | 10 | 19 |
| | Long Island Sound | 20 | 29 | 49 |
| CT-FSH | LIS Fish | 19 | 12 | 31 |
| DE | DE Inland Bays | 18 | 17 | 35 |
| | DE Inland Bays (Augmented) | | 4 | 4 |
| MA | Buzzards Bay | 7 | 8 | 15 |
| | Buzzards Bay (Augmented) | | 13 | 13 |
| | Cape Cod | 12 | 11 | 23 |
| | Remaining MA | 16 | 16 | 32 |
| | Salem Sound | 3 | 4 | 7 |
| MA-FSH | MA Fish | 28 | | 28 |
| ME | Casco Bay | 7 | 7 | 14 |
| | Casco Bay (Augmented) | | 14 | 14 |
| | Cobscook Bay | 1 | 2 | 3 |
| | ME Northern Coast | 9 | 17 | 26 |
| | Penobscot Bay | 12 | 12 | 24 |
| NH | New Hampshire | 41 | 41 | 82 |
| NJ-C | Barnegat Bay (Augmented) | | 11 | 11 |
| | NJ Coastal | 22 | 23 | 45 |
| | NJ Harbor | 8 | 6 | 14 |
| NJ-DB | DE Estuary East Side | 6 | 6 | 12 |
| | DE Estuary Small Systems | 15 | 15 | 30 |
| | DE Estuary West Side | 5 | 5 | 10 |
| | Delaware River | 11 | 11 | 22 |
| NY | Hudson River | 2 | 3 | 5 |
| | NY Harbor | 6 | 7 | 13 |
| | NY Small Systems | 9 | 9 | 18 |
| | Southern Long Island | 13 | 17 | 30 |
| RI | Narragansett Bay | 28 | 28 | 56 |
| | RI South Coast | 7 | 7 | 14 |
| RI-FSH | RI Fish | 10 | | 10 |
| Total | | 344 | 365 | 709 |

The stratification scheme described above is useful when performing regional analyses involving the estuarine systems, but may be less

convenient for states wishing to evaluate the condition of waters solely within state boundaries. This is so because a single stratum may fall across state lines. For instance, the Narragansett Bay stratum has stations in both Rhode Island and Massachusetts. Therefore, the original strata were also partitioned (when necessary) to reflect state boundaries. Thus, the original Narragansett Bay stratum was partitioned into two sub-strata: Narragansett Bay-RI and Narragansett Bay-MA. [Hexes straddling a state border were assigned to one state or the other based on the actual station location (EVNT_LAT and EVNT_LNG), and the recalculated station area is equivalent to that state's portion of water in the hex. While the other state's condition is not reported directly for border hexes, it is rigorously represented as described below.] The names of these alternate strata are listed in the parameter SUBSTRATA, and new station and stratum areas are reported in SUBAREA and SUBST_AR. Analysts wishing to perform an analysis based on a single state's data should use the parameters SUBSTRATA, SUBAREA, and SUBST_AR. We describe below how SUBAREA and SUBST_AR may be used in state analyses. The following table presents this alternate stratification scheme, listing the number of stations sampled each year, organized by state.

| Stations stratified by State | | Number of stations by year | | |
|------------------------------|---------------------------------|----------------------------|------|-------|
| Count of STATION | | YEAR | | |
| STATE | SUBSTRAT | 2000 | 2001 | Total |
| CT | CT Coastal | 9 | 10 | 19 |
| | CT Coastal - Block Island Sound | 1 | 2 | 3 |
| | LIS Fish-CT | 8 | 12 | 20 |
| | Long Island Sound-CT | 11 | 15 | 26 |
| DE | DE Estuary West Side | 5 | 5 | 10 |
| | DE Inland Bays | 18 | 17 | 35 |
| | DE Inland Bays (Augmented) | | 4 | 4 |
| | Delaware Estuary - Coast - DE | 5 | 9 | 14 |
| MA | Delaware River-DE | 6 | 6 | 12 |
| | Buzzards Bay | 7 | 8 | 15 |
| | Buzzards Bay (Augmented) | | 13 | 13 |
| | Cape Cod | 12 | 11 | 23 |
| | MA Coastal (AP) | 7 | 8 | 15 |
| | MA Coastal (VP) | 9 | 8 | 17 |
| | MA Fish | 28 | | 28 |
| | Narragansett Bay-MA | 4 | 4 | 8 |
| | Salem Sound | 3 | 4 | 7 |
| | Casco Bay | 7 | 7 | 14 |
| ME | Casco Bay (Augmented) | | 14 | 14 |
| | Cobscook Bay | 1 | 2 | 3 |
| | ME Northern Coast | 9 | 17 | 26 |
| | Penobscot Bay | 12 | 12 | 24 |
| | Portsmouth/Piscataqua -ME | 7 | 13 | 20 |
| NH | New Hampshire-NH | 34 | 28 | 62 |
| NJ | Barneget Bay (Augmented) | | 11 | 11 |
| | DE Estuary- Bay | 6 | 6 | 12 |
| | Delaware Estuary - Coast -NJ | 9 | 5 | 14 |

| | | | | |
|-------|------------------------------|-----|-----|-----|
| | Delaware River-NJ | 5 | 4 | 9 |
| | NJ Coastal | 22 | 23 | 45 |
| | NJ Harbor | 8 | 6 | 14 |
| NY | Hudson River | 2 | 3 | 5 |
| | LIS Fish-NY | 11 | | 11 |
| | Long Island Sound-NY | 9 | 14 | 23 |
| | NY Coastal- N Long Island | 1 | | 1 |
| | NY Harbor | 6 | 7 | 13 |
| | NY Small Systems | 9 | 9 | 18 |
| | Southern Long Island | 13 | 17 | 30 |
| PA | Delaware Estuary - Coast -PA | 1 | 1 | 2 |
| | Delaware River-PA | | 1 | 1 |
| RI | Narragansett Bay-RI | 24 | 24 | 48 |
| | RI Fish | 10 | | 10 |
| | RI South Coast (RI only) | 5 | 5 | 10 |
| Total | | 344 | 365 | 709 |

The parameter SYSTEM identifies the estuarine system or region encompassing a station. Generally, the system boundaries are the same as those used in previous EMAP programs; thereby providing continuity when performing analyses. For instance, the SYSTEM named Long Island Sound consists of the Sound proper in addition to all small estuaries along its shores. In some cases, however, the SYSTEM name is merely a convenient collection of regionally associated stations, e.g., Maine Coast, New Jersey Coast, etc. All stations are assigned to one or another of the 19 SYSTEM designations. Please note that the categories defined by this parameter do not necessarily reflect the stratification scheme specified by NCA managers. Rather, the SYSTEM names are intended to be descriptive indicators of location. The following Table lists the SYSTEM names, arranged north to south. The estuaries incorporated into each system and the number of stations visited in each year are also indicated.

| Count of STATION | | YEAR | | |
|------------------|---------------------------------------|------|------|-------|
| SYSTEM | ESTUARY | 2000 | 2001 | Total |
| Cobscook Bay | Cobscook Bay | | 1 | 1 |
| | East Bay | 1 | | 1 |
| | Whiting Bay | | 1 | 1 |
| Penobscot Bay | Blue Hill Bay | 1 | 2 | 3 |
| | Blue Hill Harbor | | 1 | 1 |
| | East Penobscot Bay | 1 | 2 | 3 |
| | Eggemoggin Reach | 1 | | 1 |
| | Jericho Bay | 1 | 1 | 2 |
| | Penobscot River | 1 | 1 | 2 |
| | Seal Harbor #2 (Muscle Ridge Channel) | 1 | | 1 |
| | Searsport Harbor/Long Cove | | 1 | 1 |
| | Union River Bay | 2 | 1 | 3 |
| | West Penobscot Bay | 4 | 3 | 7 |
| | Englishman Bay | | 1 | 1 |
| Maine Coast | Flanders Bay | | 1 | 1 |
| | Frenchman Bay | 1 | | 1 |

| Count of STATION SYSTEM | ESTUARY | YEAR 2000 | 2001 | Total |
|----------------------------|------------------------------|--------------|------|-------|
| | Hockomock Bay | | 1 | 1 |
| | Kennebec River | | 1 | 1 |
| | Lubec Channel | | 1 | 1 |
| | Machias Bay | 1 | | 1 |
| | Machias River | | 1 | 1 |
| | Medomak River | | 1 | 1 |
| | Meduncook River | | 1 | 1 |
| | Moose Cove | 1 | | 1 |
| | Muscongus Sound | 1 | | 1 |
| | Narraguagus Bay | 2 | | 2 |
| | Saco Bay | | 3 | 3 |
| | Scarborough River | | 1 | 1 |
| | Sheepscot River | 1 | | 1 |
| | Sheepscott Bay | 1 | | 1 |
| | Southwest Bay | | 1 | 1 |
| | St. Croix River | | 2 | 2 |
| | St. George River | 1 | | 1 |
| | Sullivan Harbor | | 1 | 1 |
| | Wells Embayment | | 1 | 1 |
| Casco Bay | Casco Bay | 2 | 2 | 4 |
| | Casco Bay NEP | | 14 | 14 |
| | Cousins Island Sound | | 2 | 2 |
| | Diamond Island Roads | | 1 | 1 |
| | Harpswell Sound | 1 | | 1 |
| | Harraseeket River | 1 | | 1 |
| | Luckse Sound | 1 | | 1 |
| | New Meadows River | 1 | 2 | 3 |
| | Portland Harbor | 1 | | 1 |
| Great Bay Region | Great Bay | 11 | 12 | 23 |
| | Hampton River/Hampton Harbor | 4 | 4 | 8 |
| | Little Bay | 2 | 1 | 3 |
| | Little Harbor | 3 | 2 | 5 |
| | Piscataqua River | 14 | 16 | 30 |
| | Portsmouth Harbor | 7 | 6 | 13 |
| MA North Coast | Beverly Harbor | | 1 | 1 |
| | Boston Inner Harbor | 1 | 1 | 2 |
| | Broad Sound | 1 | | 1 |
| | Dorchester Bay | | 1 | 1 |
| | Essex Bay | 1 | | 1 |
| | Gloucester Harbor | 1 | 2 | 3 |
| | Hingham Bay | 1 | | 1 |
| | Ipswich Bay | 1 | | 1 |
| | MA Fish | 4 | | 4 |
| | Merrimack River | 1 | 1 | 2 |
| | Nahant Bay | | 1 | 1 |
| | North/South Rivers | 1 | 2 | 3 |
| | Plum Island Sound | | 1 | 1 |
| | Salem Sound | 2 | 1 | 3 |

| Count of STATION SYSTEM | ESTUARY | YEAR 2000 | 2001 | Total |
|----------------------------|--------------------|--------------|------|-------|
| | Sandy Bay | | 1 | 1 |
| Cape Cod | Cape Cod Bay | 10 | 8 | 18 |
| | Cape Cod Canal | 1 | 1 | 2 |
| | Duxbury Bay | | 1 | 1 |
| | Kingston Bay | 1 | 1 | 2 |
| | MA Fish | 18 | | 18 |
| Narragansett Bay | Greenwich Bay | 2 | 2 | 4 |
| | Mt. Hope Bay | 5 | 3 | 8 |
| | Narragansett Bay | 17 | 12 | 29 |
| | Providence River | 2 | 3 | 5 |
| | Sakonnet River | 7 | 4 | 11 |
| | Taunton River | 4 | 2 | 6 |
| | Warren River | 1 | 2 | 3 |
| Buzzards Bay | Buzzards Bay | 5 | 7 | 12 |
| | Buzzards Bay NEP | | 13 | 13 |
| | MA Fish | 6 | | 6 |
| | New Bedford Harbor | | 1 | 1 |
| | Westport River | 2 | | 2 |
| MA South Coast | Chatham Harbor | 1 | 2 | 3 |
| | Katama Bay | 1 | | 1 |
| | Lewis Bay | 1 | 1 | 2 |
| | Maddaket Harbor | 1 | 1 | 2 |
| | Menemsha Pond | | 1 | 1 |
| | Nantucket Harbor | 1 | 1 | 2 |
| | Nauset Harbor | 1 | | 1 |
| | Popponesset Bay | 1 | 1 | 2 |
| | Vineyard Ponds | 1 | 1 | 2 |
| | Waquoit Bay | 1 | | 1 |
| Hudson River | Hudson River | 4 | 6 | 10 |
| Block Island Sound | Fishers Sound | 3 | 2 | 5 |
| | Mystic River | | 1 | 1 |
| | Ninigret Pond | 1 | 2 | 3 |
| | Point Judith Pond | 2 | 1 | 3 |
| | Quonochontaug Pond | 1 | | 1 |
| | Winnipaug Pond | | 1 | 1 |
| Long Island Sound | Block Island Sound | | 1 | 1 |
| | Connecticut Ponds | 1 | | 1 |
| | Connecticut River | 3 | 2 | 5 |
| | Hempstead Harbor | 1 | 1 | 2 |
| | Housatonic River | 2 | 2 | 4 |
| | Little Neck Bay | 2 | 1 | 3 |
| | Long Island Sound | 39 | 40 | 79 |
| | Manhasset Bay | 1 | 1 | 2 |
| | Mystic River | 1 | 1 | 2 |
| | New Haven Harbor | | 2 | 2 |
| | Niantic River | 1 | | 1 |
| | Northport Bay | 2 | 1 | 3 |
| | Oyster Bay | 2 | 2 | 4 |

| Count of STATION SYSTEM | ESTUARY | YEAR 2000 | 2001 | Total |
|----------------------------|-----------------------|--------------|------|-------|
| | Port Jefferson Harbor | 1 | 2 | 3 |
| | Stoney Brook Harbor | | 1 | 1 |
| | Thames River | 1 | 3 | 4 |
| Southern Long Island | Gardiners Bay | 2 | 2 | 4 |
| | Great Peconic Bay | 1 | 1 | 2 |
| | Great South Bay | 3 | 4 | 7 |
| | Hempstead Bay | 3 | 2 | 5 |
| | Lake Montauk | 2 | | 2 |
| | Little Peconic Bay | 1 | 1 | 2 |
| | Moriches Bay | | 1 | 1 |
| | Napeague Bay | | 2 | 2 |
| | Shelter Sound | | 3 | 3 |
| | Shinnecock Bay | 1 | 1 | 2 |
| NY/NJ Harbor | Arthur Kill | 1 | 1 | 2 |
| | East River | 2 | | 2 |
| | Harlem River | | 2 | 2 |
| | Jamaica Bay | 1 | 1 | 2 |
| | Lower NY/NJ Bay | 1 | 4 | 5 |
| | Newark Bay | 1 | 1 | 2 |
| | Passaic River | 2 | | 2 |
| | Raritan Bay | | 1 | 1 |
| | Raritan River | 2 | | 2 |
| | Sandy Hook Bay | 1 | | 1 |
| | Upper NY/NJ Bay | 1 | | 1 |
| Delaware River | Delaware River | 7 | 8 | 15 |
| | Leipsic River | | 1 | 1 |
| | Schuykill River | 1 | 1 | 2 |
| | Stow Creek | 1 | | 1 |
| New Jersey Coast | Barneгат Bay | 3 | 8 | 11 |
| | Cape May Harbor | | 1 | 1 |
| | Great Bay | 1 | 2 | 3 |
| | Great Egg Harbor | 3 | 4 | 7 |
| | Great Sound | 3 | 2 | 5 |
| | Little Egg Harbor | 2 | 4 | 6 |
| | Ludlum Bay | 1 | 1 | 2 |
| | Manasquan River | 1 | | 1 |
| | Metedeconk River | | 1 | 1 |
| | Mullica River | 2 | 4 | 6 |
| | Navesink River | 2 | 1 | 3 |
| | Reed/Abescon Bays | 2 | 2 | 4 |
| | Shark River | 1 | 2 | 3 |
| | Shrewsbury River | | 1 | 1 |
| | Toms River | 1 | 1 | 2 |
| Delaware Bay | Alloway Creek | 1 | | 1 |
| | Appoquinimink River | | 1 | 1 |
| | Broadkill River | 1 | | 1 |
| | C&D Canal | 1 | 1 | 2 |
| | Cape May Canal | 2 | | 2 |

| Count of STATION SYSTEM | ESTUARY | YEAR | | |
|----------------------------|--------------------------------|------|------|-------|
| | | 2000 | 2001 | Total |
| | Cedar Swamp | 1 | | 1 |
| | Christina River | 1 | 2 | 3 |
| | Cohansey River | 2 | | 2 |
| | Delaware Bay | 14 | 12 | 26 |
| | Dennis Creek | 1 | | 1 |
| | Duck Creek | | 1 | 1 |
| | Leipsic River | 1 | 1 | 2 |
| | Mannington Meadow | 1 | | 1 |
| | Maurice River | 2 | 2 | 4 |
| | Mispillion River | | 1 | 1 |
| | Murderkill River | | 1 | 1 |
| | Nantuxent Creek | | 2 | 2 |
| | St. Jones River | | 1 | 1 |
| | Stow Creek | | 1 | 1 |
| | West / East Creeks | | 1 | 1 |
| DE Inland Bays | Assawoman & Isle Of Wight Bays | 1 | | 1 |
| | Indian River Bay | 4 | 5 | 9 |
| | Little Assawoman Bay | 1 | 3 | 4 |
| | Nanticoke River | 5 | 4 | 9 |
| | Pepper Creek | 2 | 1 | 3 |
| | Rehobeth Bay | 5 | 8 | 13 |
| Total | | 344 | 365 | 709 |

Calculations using station areas and stratum areas. The following is a brief description of how an analyst might use station area (AREA or SUBAREA) and stratum area (ST_AREA or SUBST_AR) to estimate estuarine condition in a region or state. For example, we may wish to calculate the percent of estuarine area with dissolved oxygen (DO) concentration less than 5 mg/L. We consider two cases: calculating condition within a single stratum, and determining the condition over multiple strata. The percent of degraded area in a single stratum is calculated simply by 1) summing the station area (AREA or SUBAREA) for stations in the stratum with DO < 5 mg/L; then 2) dividing by the sum of all station areas contributing data in the stratum, i.e., excluding any stations with missing data. Thus, we may find that, based on *stations with data*, 30% of estuarine area has DO < 5 mg/L and 70% has DO ≥ 5 mg/L. We may then assume that area with missing data has an identical distribution of condition; therefore, we report that 30% of the *entire stratum* area has DO < 5 mg/L. That is, we use an estimate based on a sub-population of data (stations with data) to estimate the condition of the entire stratum. Note that the stratum area (ST_AREA or SUBST_AR) is not required in this calculation if we wish to express the extent of impaired area in relative terms (i.e., expressed as percent).

To estimate the condition for a region comprised of several strata, the calculate a weighted average of conditions in each stratum, using weighting factors that are proportional to stratum areas: 1) calculate the percent impairment for each stratum in the region (as described above); 2) multiply each estimate by the associated stratum area; and 3) sum these products and

divide by the sum of stratum areas. This calculation yields the percent area in the region with impaired condition.

The parameter STA_ALT indicates whether the station location was the original site, first alternate, or second alternate by "A", "B", or "C", respectively. The user may wish to adjust the magnitude of the weighting factor (station areas) based on the value of STA_ALT, for example, by multiplying the weighting factor by 0.5 or 0.33 if sampling crews had to sample at the first or second alternate location, respectively. Such an adjustment reflects the fact that the station did not represent the entire area originally assigned to the station.

4.4 Summary of Dataset Parameters

* denotes parameters that should be used as key fields when merging data

| | |
|-----------|---|
| *STATION | Station name |
| *STAT_ALT | Alternate site code (A, B, or C) |
| ESTUARY | Estuary name |
| STA_LAT | Latitude (decimal degrees, datum NAD83) |
| STA_LNG | Longitude (decimal degrees, datum NAD83) |
| ST_COOP | State cooperative agreement responsible for sampling |
| LOCAL_ID | Station identifier used by state |
| STATE | State jurisdiction of station |
| PROVINCE | Bio-geographical province containing station (AP or VP) |
| SYSTEM | Estuarine system or region name |
| STRATA | Original stratum name: regional stratification scheme |
| AREA | Station area (km2): regional stratification scheme |
| ST_AREA | Stratum area (km2): regional stratification scheme |
| SUBSTRAT | Alternate stratum name: state stratification scheme |
| SUBAREA | Alternate station area (km2): state stratification scheme |
| SUBST_AR | Alternate stratum area (km2): state stratification scheme |

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

Data in this data file were not acquired in the field or in laboratories; rather values were assigned by NCA program planners.

5.2 Data Preparation and Sample Processing

No analytical processing was involved with the STATIONS parameters

6. DATA ANALYSIS AND MANIPULATIONS

6.1 Name of New or Modified Values

Not applicable

6.2 Description of Data Manipulation

Not applicable

7. DATA DESCRIPTION

7.1 Description of Parameters

7.1.1 Components of the Dataset

| PARAMETER | TYPE | LENGTH | LABEL |
|-----------|------|--------|-----------------------------------|
| STATION | Char | 10 | NCA station name |
| STAT_ALT | Char | 1 | Alternate site code (A, B, C) |
| STATE | Char | 2 | State where station is located |
| ESTUARY | Char | 40 | Estuary name |
| PROVINCE | Char | 2 | Province name |
| STA_LAT | Num | 8.4 | Latitude (decimal degrees, datum |
| STA_LNG | Num | 8.4 | Longitude (decimal degrees, datum |
| ST_COOP | Char | 6 | State Cooperative Agreement |
| LOCAL_ID | Char | 8 | Station identifier used by state |
| STRATA | Char | 20 | Stratum name (regional scheme) |
| SYSTEM | Char | 20 | Estuarine system or region name |
| AREA | Num | 8.3 | Station area (regional scheme) |
| ST_AREA | Num | 8.3 | Stratum area (regional scheme) |
| SUBSTRAT | Char | 20 | Stratum name (state scheme) |
| SUBAREA | Num | 8.3 | Station area (state scheme) |
| SUBST_AR | Num | 8.3 | Stratum area (state scheme) |

7.1.2 Precision of Reported Values

STA_LAT and STA_LNG are reported to 0.0001 decimal degree units. AREA, SUB AREA, ST_AREA, and SUBST_AR are reported to three significant digits.

7.1.3 Minimum Value in Dataset

| Name | Min |
|----------|----------|
| STA_LAT | 38.4521 |
| STA_LNG | -75.7737 |
| AREA | 0.002 |
| SUBAREA | 0.002 |
| ST_AREA | 49.8 |
| SUBST_AR | 2.39 |

7.1.4 Maximum Value in Dataset

| Name | Max |
|---------|----------|
| STA_LAT | 44.9456 |
| STA_LNG | -67.0939 |
| AREA | 165 |
| SUBAREA | 150 |

ST_AREA 3130
SUBST_AR 1690

7.2 Data Record Example

| STATION | STAT_ALT | STATE | ESTUARY | STA_LAT | STA_LNG | PROVINCE | ST_COOP |
|-----------|----------|-------|-------------------|---------|----------|----------|---------|
| CT00-0001 | A | CT | Connecticut Ponds | 41.1512 | -73.2199 | VP | CT |
| CT00-0003 | A | CT | Housatonic River | 41.2877 | -73.0710 | VP | CT |
| CT00-0005 | A | CT | Connecticut River | 41.2738 | -73.0661 | VP | CT |

| SYSTEM | LOCAL_ID | STRATA | AREA | ST_AREA | SUBSTRAT | SUBAREA | SUBST_AR |
|----------|----------|------------|------|---------|------------|---------|----------|
| LI Sound | 21A | CT Coastal | 1.13 | 84.4 | CT Coastal | 1.13 | 84.4 |
| LI Sound | 23A | CT Coastal | 3.26 | 84.4 | CT Coastal | 3.26 | 84.4 |
| LI Sound | 25A | CT Coastal | 0.06 | 84.4 | CT Coastal | 0.06 | 84.4 |

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude (Westernmost)
-75.6977 decimal degrees

8.2 Maximum Longitude (Easternmost)
-67.0482 decimal degrees

8.3 Minimum Latitude (Southernmost)
38.4739 decimal degrees

8.4 Maximum Latitude (Northernmost)
45.1848 decimal degrees

8.5 Name of area or region
The National Coastal Assessment Northeast Region covers the northeastern US coastline from Maine to Delaware.

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Measure Quality Objective
Not applicable

9.2 Data Quality Assurance Procedures
Not applicable

9.3 Actual Measurement Quality
Not applicable

10. DATA ACCESS

10.1 Data Access Procedures

Data can be downloaded from the web

<http://www.epa.gov/emap/nca/html/regions/index.html>

10.2 Data Access Restrictions

None

10.3 Data Access Contact Persons

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10.4 Dataset Format

ASCII (CSV) and SAS Export files

10.5 Information Concerning Anonymous FTP

Not available

10.6 Information Concerning WWW

No gopher access, see Section 10.1 for WWW access

10.7 EMAP CD-ROM Containing the Dataset

Data not available on CD-ROM

11. REFERENCES

Strobel, C.J. 2000. Environmental Monitoring and Assessment Program: Coastal 2000 - Northeast component: field operations manual. Narragansett (RI): U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division. EPA/620/R-00/002. 68 p.

U.S. EPA. 2001. National Coastal Assessment: Field Operations Manual. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/003. 72 p.

U.S. EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan 2001-2004. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/002. 189 p.

12. TABLE OF ACRONYMS

| | |
|------|---|
| AED | Atlantic Ecology Division |
| DE | Delaware |
| CSC | Computer Sciences Corporation |
| CT | Connecticut |
| EMAP | Environmental Monitoring and Assessment Program |

EPA Environmental Protection Agency
MAIA Mid-Atlantic Integrated Assessment
MA Massachusetts
ME Maine
km2 Square kilometers
NCA National Coastal Assessment
NH New Hampshire
NHEERL National Health and Environmental Effects Research Laboratory
NJ New Jersey
NY New York
NYC New York City
PA Pennsylvania
QA/QC Quality Assurance/Quality Control
RI Rhode Island
UNH University of New Hampshire
WWW World Wide Web

13. PERSONNEL INFORMATION

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